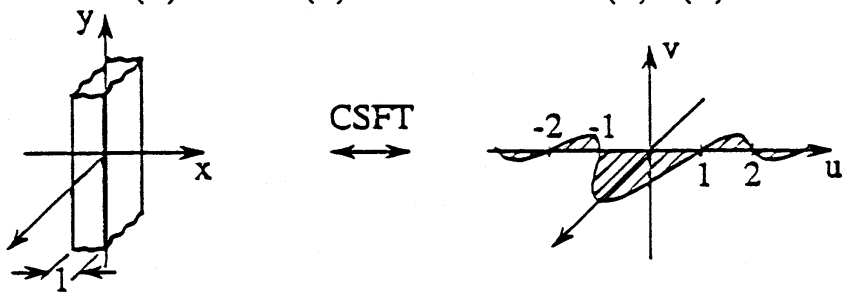
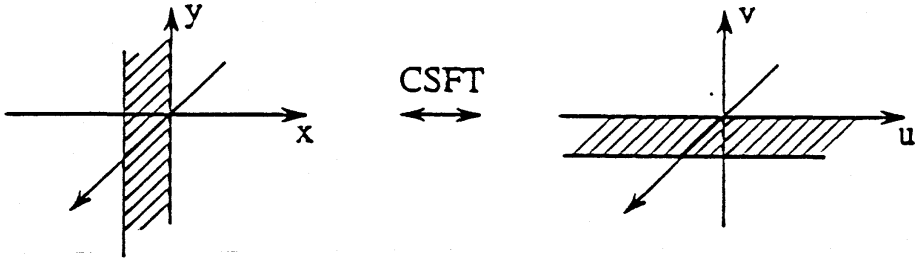
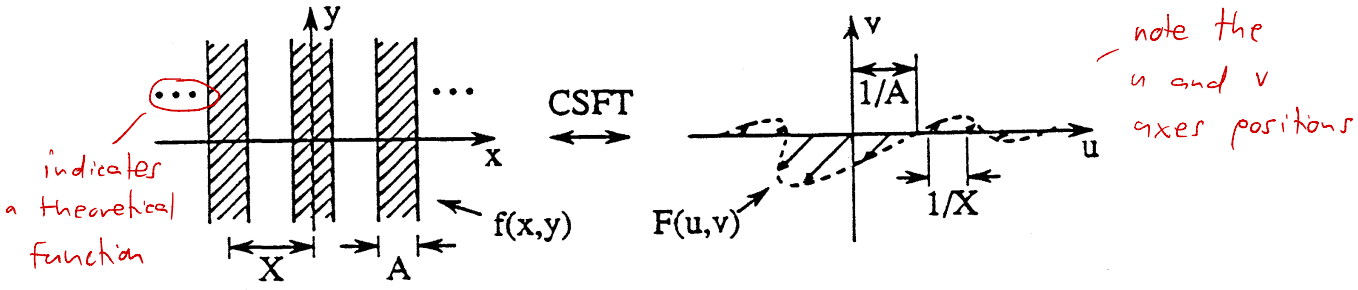
7. $\text{rect}(x) = \text{rect}(x) \cdot 1 \overset{\text{CSFT}}{\leftrightarrow} \text{sinc}(u)\,\delta(v)$



8. $\delta(x) = \delta(x) \cdot 1 \overset{\text{CSFT}}{\leftrightarrow} 1 \cdot \delta(v) = \delta(v)$

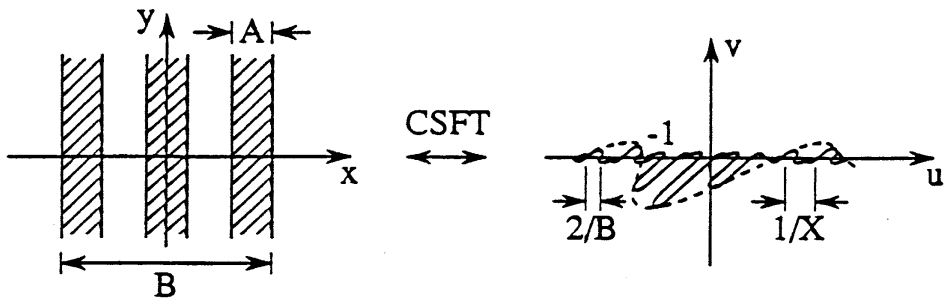


2.1.4 PERIODIC STRUCTURES



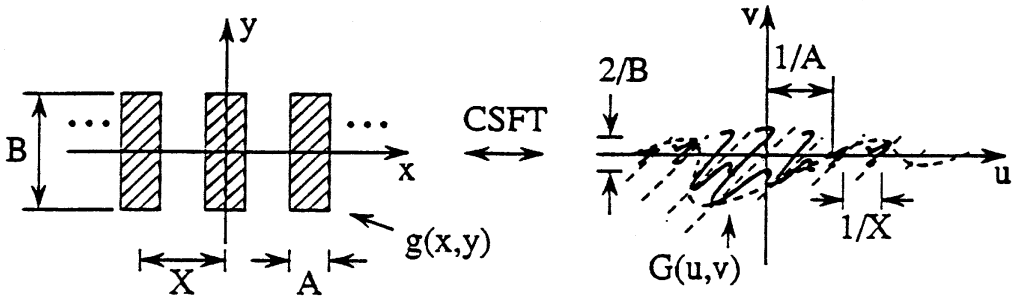
$$f(x,y) = \text{rep}_X[\text{rect}(x/A)] \cdot 1$$

$$F(u,v) = \frac{1}{X}\,\text{comb}\,\frac{1}{X}\,[A\,\text{sinc}\,(Au)]\,\delta(v)$$



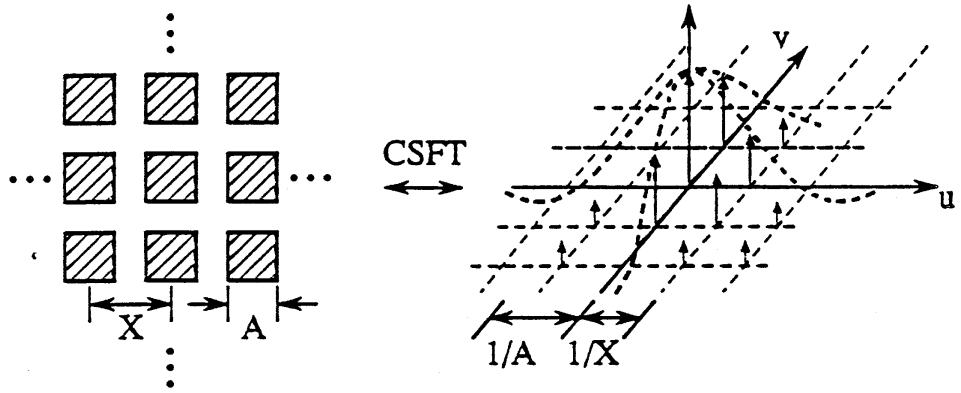
$$g(x,y) = [\text{rect}(x/B) \cdot 1]\, f(x,y)$$

$$G(u,v) = B\,\text{sinc}(Bu)\ \delta(v) \ast\ast\ F(u,v)$$



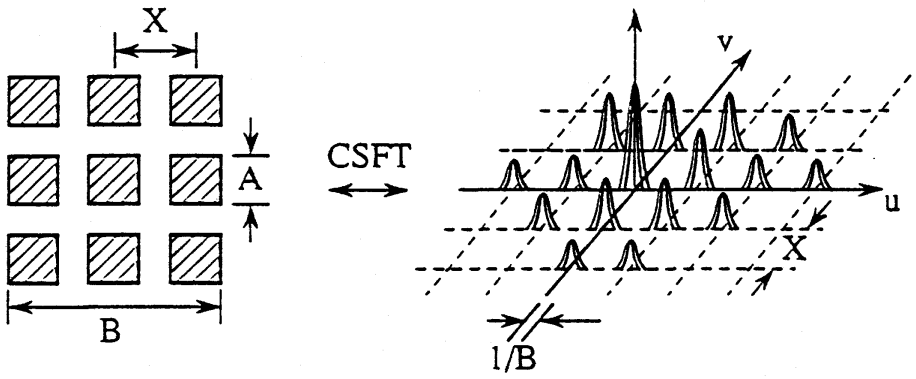
$$g(x,y) = \left[1 \bullet \text{rect}\ (y/B)\right] f(x,y)$$

$$G(u,v) = \delta(u)\ B\ \text{sinc}(Bv) \ast\ast\ F(u,v)$$



$$f(x,y) = \text{rep}_{XX}\left[\text{rect}(\frac{x}{A},\ \frac{y}{A})\right]$$

$$F(u,v) = \frac{1}{X^2}\ \text{comb}\ \frac{1}{X}\ \frac{1}{X}\ [A^2\text{sinc}(Au,Av)]$$



$$g(x,y) = \text{rect}\left(\frac{x}{B}, \frac{y}{B}\right) f(x,y)$$

$$G(u,v) = B^2 \text{sinc}(Bu, Bv) \;** F(u,v)$$